

REMARKS

The Invention:

The invention provides a bandsaw blade having un-set teeth, each tooth having a cutting extension. The cutting extension extends beyond the height of the tooth body. An individual cutting extension has a width less than the width of the tooth body, but the total width of the cutting extensions in a group of teeth is the same as, or greater than, the width of the teeth. The cutting extensions are positioned on the teeth in a group so that outer edges of the one cutting extension are generally aligned with the outer edge of a cutting extension on another tooth or aligned with the outer edge of the tooth. Thus, the cutting extensions are not aligned. As used herein, "aligned" means aligned as viewed along the longitudinal axis of the bandsaw blade.

Preferably, the cutting extensions within a group are each the same width, *e.g.*, one-third the width of the tooth. The cutting extensions within a group of teeth are positioned so that each tooth is located over a different portion of each tooth in the group. Thus, in a three-tooth group, each extension is one-third the width of the tooth. One extension is located over the left most third of one tooth, a second extension is located over the center third of another tooth, and a third extension is located over the right third of the remaining tooth. Generally, if there are "n" teeth in a group, each tooth has an extension wherein the extension has a width that is $1/n^{\text{th}}$ the width of the tooth.

Alternatively, a single tooth may have more than one extension so long as the total width of the sum of the widths of the extensions within a set group of teeth is generally equal to or greater than the width of the tooth body. For example, in a two-tooth group, the first tooth may have a centrally located extension that is one-half the width of the tooth body. The second tooth in the group has two extensions, each being about one-fourth the width of the tooth body, located adjacent to the outer edges of the tooth. Thus, the total width of the extensions, $1/2 + 1/4 + 1/4$, is about the same as the width of the tooth and the extensions are not aligned with each other. As such, in either embodiment, the cutting load on each tooth is about the same.

Status of the Claims

Claims 1-19 remain pending in this application. Claims 6, 7, 10, 11, 13, and 14 are the subject of a restriction requirement with traverse.

Claims 1-5, 8, 9, 12, and 15-19 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention.

Claims 1-5, 8, 9, 12, and 15-19 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by *Foerster*, U.S. Patent No. 1,653,265.

Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* U.S. Patent No. 4,640,172.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* '172 and *Kullman* U.S. Patent No. 5,477,763.

Claims 16, 17, and 19 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* '172, *Kullman* '763 and *Stoddard*, U.S. Patent No. 5,606,900.

The drawings are also objected to as failing to show reference numbers 18 and 29 and an improper Figure number. New Figures are attached.

The specification is also objected to as being confusing.

Summary of Telephone Interview

A telephone interview was conducted between the Examiner and the undersigned attorney on November 9, 2004. During the telephone interview with the undersigned and the Examiner, the nature of "set" and "unset" teeth was discussed. Additionally, the definition of an "extension" was also discussed as well as the description in the specification, *see* page 3, lines 23-24. It was further noted that none of the cited art included an extension, that is, a structure extending above the height of the tooth body. It was noted that these terms are defined phrases, *see* page 1, line 31 to page 2, line 4; page 2, lines 12-13; and Figures 1 and 2. Based on this discussion, the Examiner indicated that the rejections under § 112 would be withdrawn. Further, it was agreed that *Foerster*, the primary reference of the present Office Action,

discloses a blade having unset teeth wherein the maximum width of different teeth in a set of teeth is located at different heights. It was also noted that *Foerster* does not disclose a tooth having an extension.

Applicant very much appreciates the opportunity to have discussed the issues pertinent to the allowance of claims

Claims 1-5, 8, 9, 12, and 15-19; Rejected Under
35 U.S.C. § 112, First and Second Paragraphs

As noted above, the meaning of “unset” in relation to a saw tooth indicates that the tooth is not tilted. Upon reviewing the definition of “unset” located in the specification, the Examiner has agreed that claims 1-5, 8, 9, 12, and 15-19 satisfy 35 U.S.C. § 112. That is, given that “unset” is defined as “un-tilted,” the claims are not indefinite and the specification enables one skilled in the art to make and/or use the invention.

Claim 1; Rejected Under 35 U.S.C. § 102(b)

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by *Foerster*, U.S. Patent No. 1,653,265. As noted above, *Foerster* does not disclose a saw tooth having an extension, that is, a structure extending above the height of the tooth body. Accordingly, *Foerster* does not anticipate the invention as claimed and Applicant requests that the Examiner withdraw the rejection under 35 U.S.C. § 102(b) set forth in the November 4, 2004 Office Action.

Claims 2-4; Rejected under 35 U.S.C. § 103(a)

Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* U.S. Patent No. 4,640,172. As noted above, *Foerster* does not disclose a saw tooth having an extension, that is, a structure extending above the height of the tooth body. *Kullmann et al.*, U.S. Patent No. 4,640,172. *Kullmann et al.* discloses a bandsaw having unset teeth wherein the teeth do not have a uniform height. As set forth in the specification of the present application, a “tooth” of a bandsaw typically includes the portion of the bandsaw body that extends upwardly

from the bandsaw body as well as a carbide tip. That is, as defined in this application, the “tooth” includes the portion of the band saw **and** the carbide tip.

The *Kullmann et al.* reference identifies the carbide tips as “cutting material plate[s] 6, 6’”. See Col. 5, line 61. Each plate 6, 6’ has a cutting surface 8, 8’. Using the definition of “tooth” as set forth in this application, the *Kullmann et al.* “tooth” includes both the plate and the tip, that is elements 6 and 8, or 6’ and 8’. As shown in Figure 1, *Kullmann et al.* discloses teeth having one of two different shapes. First, a tooth may have a cutting surface that is angled with a medial peak, as on the cutting edges identified by reference number 8’. Second, a tooth may have a cutting surface that is raised at the outer edge, as on the cutting edges identified by reference number 8. *Kullmann* does not disclose that the sum of the widths of the cutting extensions is about equal to the width of the teeth bodies. As such, neither of these references, or any combination of these references, teaches or suggests the invention as set forth in claims 2-4.

Accordingly, Applicant requests that the Examiner withdraw the rejection of claims 2-4 under 35 U.S.C. §103(a) set forth in the November 4, 2004 Office Action.

Claim 15; Rejected under 35 U.S.C. § 103(a)

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* ‘172 and *Kullman* U.S. Patent No. 5,477,763. *Foerster* and *Kullman* ‘172 are discussed above. *Kullman* ‘763 discloses a set of unset teeth wherein the teeth have a variable height and width. This type of unset teeth are discussed in the prior art section of the present application and shown in Figure 2. It is further noted that *Kullman* ‘763 states that the blade may have two groups of cutting teeth in a cycle of teeth and that the “number of teeth in the second group is at least two, preferably equal to the number of teeth in the first group” See, Col. 6, lines 63-64. As such, none of these references, or any combination of these references, teaches or suggests the invention as set forth in claim 15. Accordingly, Applicant requests that the Examiner withdraw the rejection of claim 15 under 35 U.S.C. §103(a) set forth in the November 4, 2004 Office Action.

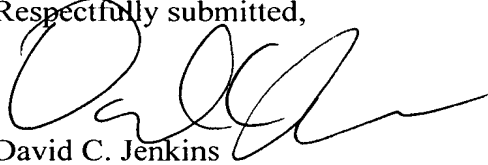
Claims 16, 17, and 19; Rejected under 35 U.S.C. § 103(a)

Claims 16, 17, and 19 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Foerster* in view of *Kullman* '172, *Kullman* '763 and *Stoddard*, U.S. Patent No. 5,606,900. *Foerster*, *Kullman* '172, and *Kullman* '763 are discussed above. *Stoddard* discloses a blade having set teeth followed by a raker tooth. The raker tooth is structured to clean the cut channel between sets of cutting teeth. There is no teaching, suggestion, or incentive supporting combination supporting the combination of these references. Moreover, for the reasons stated above, one skilled in the art would not combine a blade have set teeth with a blade having unset teeth. Accordingly, Applicant requests that the Examiner withdraw the rejection of claims 16, 17, and 19 under 35 U.S.C. §103(a) set forth in the November 4, 2004 Office Action.

CONCLUSION

Based on the amendments and remarks set forth above, Applicant submits that the application is now in proper form for issuance of a Notice of Allowance and such action is requested at an early date.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. C. Jenkins', written over the text 'Respectfully submitted,'.

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